

ro@rsingla.ca
778-926-9475
Updated June 25, 2024

ROHIT SINGLA

EDUCATION

MD/PhD (Biomedical Eng.)	University of British Columbia	2018 - Present
<i>Dissertation:</i> Quantitative Kidney Ultrasound from Macroscale to Microscale <i>Supervisors:</i> Prof. Robert Rohling & Dr. Christopher Nguan		
MASc (Biomedical Eng.)	University of British Columbia	2015 - 2017
<i>Dissertation:</i> Intra-operative Ultrasound-based Augmented Reality for Laparoscopic Surgical Guidance <i>Supervisor:</i> Prof. Robert Rohling		
BASc (Computer Eng.)	University of British Columbia	2010 - 2015
<i>Concentration:</i> Software Engineering. <i>CGPA:</i> 4.0		

HONOURS AND AWARDS

Wasan Inspiration Award (Top Doctoral Student), UBC Urologic Sciences (\$2,000)	2023
Award for Medical Students, Canadian Medical Hall of Fame (\$5,000)	2023
War Memorial Award, IODE Canada (\$15,000)	2023
Top Doctoral Student, Vancouver Coastal Health Research Institute (\$2,000)	2023
Clinician Investigator Scholarship, UBC Faculty of Medicine (\$27,000)	2023
Bronze Distinguished Reviewer, IEEE Transactions on Medical Imaging	2022
Dean's Award for Academic Excellence, UBC Faculty of Applied Science (\$1,000)	2021
Travel Grant Award, UBC School of Biomedical Engineering (\$1,500)	2021
Allied Health Doctoral Fellowship, Kidney Foundation of Canada (\$25,000)	2021 - 2023
Outstanding Reviewer (top 1%), MICCAI	2021
Presidential Student Mentor Grant, American Society of Transplant Surgeons (\$5,000)	2021
Dr. J. Paul Whelan Urology Award, Island Health Urology Dept. (\$1,000)	2021
Student Leadership Award, UBC Medical Alumni Association (\$500)	2020
Vanier Scholarship, NSERC (\$50,000/year, 3 years; ranked 1st nationally)	2020 - 2023
Four Year Fellowship, University of British Columbia (declined)	2020 - 2024
BC MEDTECH Graduate Award, UBC School of Biomedical Engineering (\$1,450)	2019
Excellent Reviewer, ML4H Workshop at NeurIPS (top 5%)	2019
Graduate Support Initiative, UBC School of Biomedical Engineering (\$4,000)	2019
Graduate Award, UBC Faculty of Medicine (\$7,800)	2019
Clinician Investigator Scholarship, UBC Faculty of Medicine (\$26,000)	2019
2nd Best Poster, Western Section of American Urology Association (\$500)	2018
Best Paper, 11th AE-CAI Workshop at MICCAI (\$500)	2017
Best Paper, 11th Lorne Sullivan UBC Urology Research Day (\$250)	2017
Graduate Student Initiative Award, University of British Columbia (\$500)	2017
Rising Star Award, UBC Faculty of Applied Science	2017
Faces of Today Recipient, UBC Student Leadership Conference	2017
Engineers in Scrubs Fellow, University of British Columbia	2015 - 2017
Margaret E. Barr Bigelow Scholarship, University of British Columbia (\$400)	2015
Alexander Graham Bell Canada Graduate Scholarship, NSERC (\$17,500)	2015

Finalist, Awards for Excellence in Biomedical Engineering, Medical Device Development Centre	2015
Thomas Beeching Scholarship, University of British Columbia (\$500)	2014
Thomas Ellis and Minnie E. Ladner Memorial Scholarship, University of British Columbia (\$950)	2014
Undergraduate Research Award, NSERC (\$4,500)	2014
Dean's Honour List, UBC Faculty of Applied Science	2011 - 2015
Engineering Entrance Scholarship, Engineers and Geoscientists BC (\$2,500)	2010
President's Entrance Scholarship, University of British Columbia (\$2,500)	2010

PROFESSIONAL AND RESEARCH EXPERIENCE

Contract Scientific Consultant	Bloom Burton & Co	2024 - Present
<ul style="list-style-type: none"> Performed indication prioritisation for a neuro-focused biotech, evaluating mechanisms of action, preclinical models, and clinical trial design to inform strategic decisions. Updated and refined analysis of key sub-sectors within the biotechnology industry, identifying high-priority companies for potential transactions. 		
Consultant (Contract)	Amplitude Ventures	2023 - Present
<ul style="list-style-type: none"> Led the landscaping of mRNA cancer vaccines as well as advanced drug delivery systems, including LNPs and AAVs, informing strategic investment decisions Performed detailed due diligence on an undisclosed biotechnology company specialising in drug delivery, evaluating their technology, market position, and investment potential 		
Consultant	Sonus Microsystems	May 2024 - June 2024
<ul style="list-style-type: none"> Reporting to the CEO, assisted in biomarker selection and assessment of clinical utility in different settings for a wearable cardiac ultrasound device 		
Co-Founder	Epiloid Biotechnology	2021 - 2023
<ul style="list-style-type: none"> Established a novel biotechnology business model focused on reducing risk in epileptic drug development using brain organoid functional testing. 		
Graduate Research Assistant	University of British Columbia	2018 - 2023
<ul style="list-style-type: none"> Pioneered research into optimising ultrasound-based diagnostic techniques for kidney disease, culminating in a classification algorithm with an 80% detection rate for early-stage disease. Managed a cross-disciplinary team of 9 researchers and medical professionals, achieving successful development and validation of an innovative method for kidney disease characterization. Authored and obtained highly competitive grant proposals, securing \$75,000 for advancing research initiatives.¹ 		
Fellow	Amplitude Ventures	2022
<ul style="list-style-type: none"> Selected as one of seven fellows from 150 doctoral candidates to collaborate with Amplitude's venture creation team on world-changing projects. Developed biotechnology platform venture hypotheses through scientific insights, competitive landscape mapping, key opinion leader interviews 		
Co-Founder	92 Medical	2017 - 2018

¹ CUASF Early Investigator Grant - \$50,000, UBC Health Innovation Funding Investment - \$25,000

- Co-founded a medical venture to enhance ultrasound-guided navigation for epidural injections.
- Directed product development from concept to prototype. Conducted pre-clinical studies, customer discovery, and market research to drive product design.

Research Engineer **University of British Columbia** **2018**

- Oversaw 12 research projects across various hospital departments, ensuring productive collaboration and timely project completion.
- Authored 5 successful grant proposals, amassing \$135,000 in research and development funding.
- Developed and released an iOS app for recording and quantifying labouring women's shivering.
- Utilised neural networks to detect kidney stones in fluoroscopy, achieving a mean precision of 0.70 ± 0.10 and providing valuable diagnostic insights for medical professionals.
- Developed two HoloLens apps for immersive medical training, including a 3D spine modelling app and a simulated operating room app.

Graduate Research Assistant **University of British Columbia** **2015 - 2017**

- Led development of 3 ultrasound-based augmented reality systems for kidney cancer surgery, achieving a 50% improvement in healthy tissue removal in mock surgeries.
- Utilised C++, OpenCV and OpenGL to develop the systems, demonstrating proficiency in advanced programming languages and software tools.
- Partnered with Northern Digital Inc. and Imperial College London to devise systems and methodologies for critical evaluation.

Research Assistant **University of British Columbia** **2014 - 2015**

- Advanced surgical views during kidney cancer surgeries by creating software that integrated mini-projector, ultrasound, and surgical robot technologies.
- Facilitated international collaboration with Imperial College London for the software solutions' development and implementation.

Software Development Intern **Safe Software** **2013, 2015**

- Redesigned five database modules, increasing operational efficiency.
- Ensured robust software performance by conducting rigorous testing and debugging of the database redesign.

Software Developer Co-op **NetApp** **2012**

- Improved the performance of an in-house Perl daemon and rectified defects in ONTAP, a leading data management operating system.

SELECTED PUBLICATIONS AND PRESENTATIONS²

Peer-Reviewed Journal Publications

1. **Singla R**, Ringstrom C, Hu G, Lessoway V, Reid J, Nguan C, Rohling R. The Open Kidney Data Set. In 2023 The 4th International Workshop of Advances in Simplifying Medical UltraSound (ASMUS). Vancouver, Canada.
2. Pupic N, Ghaffari-Zadeh A, Hu R, **Singla R**, Darras K, Karwowska A, Forster BB. An evidence-based approach to artificial intelligence education for medical students: A systematic review. PLOS Digital Health. 2023 Nov 27;2(11):e0000255.

² This section only includes works wherein I am first, second, third or senior author.

3. **Singla R**, Ringstrom C, Hu R, Hu Z, Lessoway V, Reid J, Nguan C, Rohling R. Automatic measurement of kidney dimensions in two-dimensional ultrasonography is comparable to expert sonographers. *Journal of Medical Imaging*. 10(3), 034003 (2023), doi: 10.1117/1.JMI.10.3.034003.
4. **Singla R**, Hu R, Ringstrom C, Lessoway V, Reid J, Nguan C, Rohling R. The Kidneys Are Not All Normal: Transplanted Kidneys and Their Speckle Distributions. *Ultrasound in Medicine & Biology*. 2023 May 1;49(5):1268-74.
5. Hu Z, Hu R, Yau O, Teng M, Wang P, Hu G, **Singla R**. Tempering Expectations on the Medical Artificial Intelligence Revolution: The Medical Trainee Viewpoint. *JMIR Medical Informatics*. 2022 Aug 15;10(8):e34304³
6. Hu R, Fan KY, Pandey P, Hu Z, Yau O, Teng M, Wang P, Li A, Ashraf M, **Singla R**. Insights from teaching artificial intelligence to medical students in Canada. *Nature Communications Medicine*. 2022.
7. Yang W, **Singla R**, Maheshwari O, Fontaine C, Gil-Mohapel J. Alcohol use Disorder: Neurobiology and Therapeutics. *Biomedicines*. 2022.
8. **Singla R**, Kadatz M, Rohling R, Nguan C. Kidney Ultrasound for the Nephrologist: A Review. *Kidney Medicine*. 2022.
9. Teng M, **Singla R**, Yau O, Lamoureux D, Gupta A, Hamm C, Hu Z, Hu R, Aissiou A, Eaton S, Hu S, Kelly D, MacMillan K, Malik S, Mazzoli V, Teng Y, Laricheva M, Jarus T, Field T. Healthcare Students' Perspectives on Artificial Intelligence: A Canada-wide Survey. *JMIR Medical Education*. 2022. doi:10.2196/33390.⁴
10. Dawidek M, **Singla R**, Spooner L, Ho L, Nguan C. Clinical validation of an audio-based uroflowmetry app in adult males. *Canadian Urological Association Journal*. March 2022.
11. Burden E, Khehra K, **Singla R**, Spooner L, Cho A, Nguan C. PatientLink: A Patient Centered Status Dashboard for the Peri-operative Process. *British Medical Journal Innovations*. Sept 2021.
12. Fan K, Hu R, and **Singla R**. Introductory Machine Learning for Medical Students: A Pilot. *Medical Education – Really Good Stuff*. November 2020.
13. **Singla R**, Burlinson C, Honigmann S, Abolmaesumi P, Chau A, Rohling R. Interdisciplinary Development and Evaluation of a Novel Needle Guide For Ultrasound-Guided Lumbar Epidural Placement. *BMJ Innovations*. October 2020.
14. Hu R, **Singla R**, Deeba F, Rohling R. Acoustic Shadow Detection: Study and Statistics of B-Mode and Radiofrequency Data. *Ultrasound in Medicine and Biology*. 2019 Aug 1;45(8):2248-57.
15. Harriman DI, **Singla R**, Nguan C. The Resident Report Card: A Tool for Operative Feedback and Evaluation of Technical Skills. *The Journal of Surgical Research*. 2019 Jul 1;239:261-8.
16. Edgcumbe P, **Singla R**, Pratt P, Schneider C, Nguan C, Rohling R. Follow the light: projector-based augmented reality intracorporeal system for laparoscopic surgery. *Journal of Medical Imaging*. 2018 Feb;5(2):021216.
17. **Singla R**, Edgcumbe P, Pratt P, Nguan C, Rohling R. Intra-operative ultrasound-based augmented reality guidance for laparoscopic surgery. *Healthcare technology letters*. 2017 Nov 16;4(5):204-9.

Peer-Reviewed Conference Publications with Oral Presentations

1. Hu R, **Singla R**, Ringstrom C, Hu Z, Lessoway V, Reid J, Murray T, Nguan C, Rohling R. Prediction of Kidney Transplant Function with Machine Learning from Computational Ultrasound Features. In *2022 The 3rd International Workshop of Advances in Simplifying Medical UltraSound (ASMUS)*. Singapore.
2. Hu R, **Singla R**, Yan R, Mayer C, Rohling R. Acoustic Placenta Segmentation with a Convolutional Neural Network Weighted by Acoustic Shadow Detection. In *2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS)* 2019 Jul 23 (pp.6718-6723). IEEE. Berlin, Germany.
3. Honigmann S, Zhu YC, **Singla R**, Abolmaesumi P, Chau A, Rohling R. EpiGuide 2D: visibility assessment of a novel multi-channel out-of-plane needle guide for 2D point of care ultrasound. In *SPIE Medical Imaging 2019:*

³ Covered in the *Imaging Wire* (Jun 2022), with an audience of 10k

⁴ Covered in the *Imaging Wire* (Feb 2022), with an audience of 6.6k

Image-guided Procedures, Robotic Interventions and Modelling 2019 Mar 8 (Vol. 10951, p. 109510K.) International Society for Optics and Photonics. San Diego, USA.⁵

4. **Singla R**, Edgcombe P, Pratt P, Nguan C, Rohling R. Intra-operative ultrasound-based augmented reality guidance for laparoscopic surgery. *12th Annual Augmented Environments for Computer-Assisted Interventions (AE-CAI)*. 2017 Sep. Quebec City, Canada.
5. **Singla R**, Edgcombe P⁶, Pratt P, Schneider C, Nguan C, Rohling R. Augmented reality imaging for robot-assisted partial nephrectomy surgery. In *International Conference on Medical Imaging and Virtual Reality*. 2016 Aug 24. (pp.139-150). Bern, Switzerland.

Peer-Reviewed Conference Publications with Poster Presentations

1. **Singla R**, Ringstrom C, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. Speckle and Shadows: Ultrasound-specific Physics-based Data Augmentation Applied to Kidney Segmentation. In *International Conference on Medical Imaging with Deep Learning*. 2022 Dec 4 (pp. 1139 - 1148). PMLR. Zurich, Switzerland.
2. **Singla R**, Ringstrom C, Lessoway V, Reid J, Nguan C, Rohling R. Using Temporal Similarity in Contrastive Learning for Multi-class Kidney Ultrasound Segmentation. *Medical Imaging meets NeurIPS*, (NeurIPS workshop). December 2021.
3. Hu Z, Hu R, Yan R, Mayer C, Rohling R, **Singla R**. Automatic Placenta Abnormality Detection using Convolutional Neural Networks on Ultrasound Texture. In *Perinatal, Preterm and Paediatric Image Analysis (PIPPI)*. 2021.

Conference Abstracts with Oral Presentations

1. Lau YM, **Singla R**, Li Y, Hughes M, Strohm E, Salcudean T, Kolios M, Riazzy M, Bissonette ML, Nguan C, Rohling R, McNagny K. Novel diagnostic method for chronic kidney disease using quantitative ultrasound (QUS). *School of Biomedical Engineering Synergy Research Day*. 2022. Vancouver, Canada.⁷
2. **Singla R**, Ringstrom C, Hu R, Lessoway V, Reid J, Rohling R, Nguan C. Ultrasound Speckle Distributions of Transplanted Kidneys. *UBC Urology 16th Annual Lorne D. Sullivan Research Day*. 2022. Vancouver, Canada.
3. Hu R, **Singla R**, Hu Z, Ringstrom C, Lessoway V, Reid J, Rohling R, Nguan C. Predicting transplant kidney function decline from ultrasound only using an interpretable artificial intelligence model. *UBC Urology 16th Annual Lorne D. Sullivan Research Day*. 2022. Vancouver, Canada.
4. Hu R, Hu Z, **Singla R**, Ringstrom C, Hu G, Lessoway V, Reid J, Rohling R, Nguan C, Murray T. Predicting transplant kidney function decline from ultrasound only using an interpretable artificial intelligence model. *Canadian Association of Radiologists 2022 Annual Scientific Meeting*. Virtual. 2022.⁸
5. Ringstrom C*, **Singla R***, Hu Z, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. KidD-Net: Automatically Measuring Kidney Dimensions in Ultrasound using Machine Learning. In Annual Integrative Ultrasound Meeting Journal of Ultrasound in Medicine Supplement. 2022.
6. **Singla R***, Ringstrom C*, Hu Z, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. AutoKV-Net: Calculating Single Kidney Volume in Two-Dimensional Ultrasound Automatically by Mimicking Sonographers. In Annual Integrative Ultrasound Meeting Journal of Ultrasound in Medicine Supplement. 2022.
7. Hu Z, Hu R, Yan R, Mayer C, Rohling R, **Singla R**. Automated Placental Disease Prediction in Ultrasound with Neural Networks. *The 3rd Annual Tri-Cluster Research Day: Future of Health*. Vancouver, Canada. 2021⁹
8. **Singla R***, Ringstrom C*, Hu Z, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. AutoKV-Net: Calculating Single Kidney Volume in Two-Dimensional Ultrasound Automatically by Mimicking Sonographers. *Canadian*

⁵ S. Honigmann received a best paper award in the area of surgical robotics and related topics

⁶ Indicates joint first authorship

⁷ YM. Lau received the best poster award and second place best oral.

⁸ R Hu received 1st Place in the Radiologist-in-Training category.

⁹ Selected as one of top ten submissions. Z Hu also received the People's Choice award.

Donation and Transplantation Research Program 8th Annual Scientific Meeting. Virtual, Canada. December 2021

9. Teng M, **Singla R**, Yau O, Lamoureux D, Gupta A, Hamm C, Hu Z, Hu R, Aissiou A, Eaton S, Hu S, Kelly D, MacMillan K, Malik S, Mazzoli V, Teng Y, Laricheva M, Jarus T, Field T. Healthcare Students' Perspectives on Artificial Intelligence: a Canadian National Survey. *The 3rd Annual Tri-Cluster Research Day: Future of Health.* Vancouver, Canada. 2021¹⁰
10. **Singla R**,* Ringstrom C*, Hu Z, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. AutoKV-Net: Calculating Single Kidney Volume in Two-Dimensional Ultrasound Automatically by Mimicking Sonographers. *The 3rd Annual Tri-Cluster Research Day: Future of Health.* Vancouver, Canada. 2021¹¹
11. Teng M, **Singla R**, Yau O, Lamoureux D, Gupta A, Hamm C, Hu Z, Hu R, Aissiou A, Eaton S, Hu S, Kelly D, MacMillan K, Malik S, Mazzoli V, Teng Y, Laricheva M, Jarus T, Field T. Healthcare Students' Perspectives on Artificial Intelligence: a Canadian National Survey. *Centre for Health Education Scholarship (CHES) Celebration of Scholarship.* 2021. Vancouver, Canada.
12. Burden L, Spooner L, **Singla R**, Khehra K, Cho A, Nguan C. Addressing Perioperative Stress and Anxiety of Patient Supporters Through a Novel, Online Communications Platform: PatientLink. *Building the Future: Faculty of Medicine Research Trainee Day and Lecture Series.* 2020. Vancouver, Canada.¹²
13. Burden L, Spooner L, **Singla R**, Khehra K, Cho A, Nguan C. PatientLink: A Novel Application to Address Stress and Anxiety in Patient Supporters During Surgical Operations. *Northwest Urological Society's 66th Annual Conference.* 2020. Vancouver, Canada
14. **Singla R**, Lundeen C, Forbes C, Hogarth D, Nguan C. Fluoroscopic targeting of renal calculi during extracorporeal shockwave lithotripsy using a machine learning algorithm. *American Urological Association.* 2019. Chicago, USA.
15. Dawidek M, **Singla R**, Cho A, Ho L, Nguan C. Pilot: Clinical Comparison of An Audio-based Uroflowmetry App Against Conventional Uroflowmetry in Adults. *UBC Urology 13th Annual Lorne D. Sullivan Research Day.* 2019. Vancouver, Canada.
16. **Singla R**, Lundeen C, Forbes C, Hogarth D, Nguan C. Update on renal calculus targeting using machine learning for extracorporeal shockwave lithotripsy. *UBC Urology 13th Annual Lorne D. Sullivan Research Day* 2019. Vancouver, Canada.
17. **Singla R**, Forbes C, Lundeen C, Nguan C. Automatic renal calculi localization in fluoroscopy for extracorporeal shockwave lithotripsy. *UBC Urology 12th Annual Lorne D. Sullivan Research Day.* 2018. Vancouver, Canada.
18. **Singla R**, Rohling R, Nguan C. HoloSurgeon: towards an augmented reality enhanced surgical warm-up method. *UBC Urology 12th Annual Lorne D. Sullivan Research Day.* 2018. Vancouver, Canada.
19. Schneider C, **Singla R**, Hetherington J, Forbes C, Tang S, Lan J, Rohling R, Nguan C. Quantitative measurement of Tacrolimus-induced tremor in renal transplant recipients: a prospective feasibility study. *UBC Urology 12th Annual Lorne D. Sullivan Research Day.* 2018. Vancouver, Canada.
20. Burlinson C, **Singla R**, Honigmann S, Abolmaesumi P, Rohling R, Chau A. Single-operator, real-time ultrasound-guided neuraxial anaesthesia using a novel needle guide and 2D ultrasound. *European Society of Regional Anaesthesia and Pain Therapy.* 2018. Dublin, Ireland.
21. **Singla R**, Edgcumbe P, Pratt P, Nguan C, Rohling R. Intuitive Intraoperative Ultrasound-based Augmented Reality for Robot-Assisted Laparoscopic Surgery. *UBC Urology 11th Annual Lorne D. Sullivan Research Day.* 2017. Vancouver, Canada.

Conference Abstracts with Poster Presentations

¹⁰ Selected as one of top ten submissions

¹¹ Selected as one of top ten submissions

¹² L. Burden received the "Best Presentation" award as an outstanding work amongst all trainees.

1. **Singla R**, Lau Y, Hughes M, Hu R, Li K, Riazzy M, Bissonnette ML, McNagny K, Rohling R, Nguan C. Quantitative Ultrasound for Glomerulosclerosis in Ex-vivo Murine Kidneys. American Society of Nephrology Kidney Week. November 3, 2023; Philadelphia, USA.
2. **Singla R**, Lau Y, Hughes M, Hu R, Li K, Riazzy M, Bissonnette ML, McNagny K, Rohling R, Nguan C. Novel diagnostic method for focal segmental glomerulosclerosis using quantitative ultrasound. UBC Building the Future Research Trainee Day. March 23, 2023; Vancouver, Canada.
3. **Singla R**, Lau Y, Hughes M, Hu R, Li K, Riazzy M, Bissonnette ML, McNagny K, Rohling R, Nguan C. Detection of Focal Segmental Glomerulosclerosis in Ex-vivo Murine Kidneys using Multi-parametric Ultrasound. *2nd Pan-Canadian Molecules and Mechanisms Mediating Kidney Health and Disease (M3K) Meeting*. Montreal, Canada.
4. Pupic N, Ghaffarizadeh A, Hu R, **Singla R**, Darras K, Kupwowska A, Forster B. Artificial Intelligence Education for Medical Students: A Systematic Review. *45th Canadian Medical and Biological Engineering Society*. 2023. Vancouver, Canada.
5. **Singla R**, Ringstrom C, Hu R, Lessoway V, Reid J, Rohling R, Nguan C. Ultrasound-specific physics-based data augmentation for kidney segmentation. *UBC Urology 16th Annual Lorne D. Sullivan Research Day*. 2022. Vancouver, Canada.
6. Hu R, **Singla R**, Ringstrom C*, Hu Z, Hu G, Nguan C., Lessoway V, Reid J, Murray T, Rohling R. Kidney ultrasound classification with speckle-based feature extraction and a random forest classifier. *The 3rd Annual Tri-Cluster Research Day: Future of Health*. Vancouver, Canada.
7. Ringstrom C*, **Singla R**,* Hu Z, Hu R, Lessoway V, Reid J, Nguan C, Rohling R. KidD-Net: Automatically Measuring Kidney Dimensions in Ultrasound using Machine Learning. *The 3rd Annual Tri-Cluster Research Day: Future of Health*. Vancouver, Canada.
8. **Singla R**, Ringstrom C, Lessoway V, Reid J, Nguan C, Rohling R. Towards Label Efficient Multi-class Kidney Ultrasound Segmentation. *Image Guided Therapeutics and Diagnostics Symposium*. 2021.
9. Ringstrom C, **Singla R**, Lessoway V, Reid J, Nguan C, Rohling R. Automatic Measurement of Kidney Length in Ultrasound using a Convolutional Neural Network. *Image Guided Therapeutics and Diagnostics Symposium*. 2021.
10. R Hu, Z Hu, Yan R, Mayer C, Rohling R, **Singla R**. Automated Placental Disease Prediction in Ultrasound with Neural Networks. *Image Guided Therapeutics and Diagnostics Symposium*. 2021.
11. Hu Z, Hu R, **Singla R**, Yan R, Rohling R, Mayer C. Automated AI-based risk stratification of placental disease from ultrasound imaging with a convolutional neural network system. *UBC Radiology Research Day*. 2021. Virtual.¹³
12. **Singla R**, McBurney K, Gil-Mohapel J. Near Peer Anatomy Tutoring in Medical Education: A Pilot Study. *Canadian Conference on Medical Education*. 2021. Virtual.
13. Burden L, **Singla R**, Farrell L. Parental Leave Policies in Canadian Undergraduate Medical Education: A Policy Review. *Canadian Conference on Medical Education*. 2021. Virtual.
14. Burden L, Spooner L, **Singla R**, Khehra K, Cho A, Nguan C. PatientLink: a novel application to address stress and anxiety in patient supporters during surgical operation. Canadian Urological Association Conference. 2020. Victoria, Canada.
15. Davey C, Lyman K, **Singla R**, Harriman D, Nguan C. "Baseline Measurements of Physical Function and Frailty in Pre-Transplantation End Stage Renal Disease Patient". Canadian Urological Association Conference. 2020. Victoria, Canada.
16. Dawidek M, **Singla R**, Spooner L, Nguan C. Clinical Validation of an Audio-based Uroflowmetry App in Adult Males. Canadian Urological Association Conference. 2020. Victoria, B.C.
17. Burden L, Spooner L, **Singla R**, Khehra K, Cho A, Nguan C. PatientLink: A Novel Application to Address Stress and Anxiety in Patient Supporters During Surgical Operations. *Quality Forum 2020: Shaping Success Together*. 2020. Vancouver, Canada.

¹³ Z. Hu received the Canada Diagnostic Centre's Best Poster Award as an outstanding work among medical trainees.

18. Philips D, Gill D, **Singla R**, Spooner L, Tang S, Nguan C. A Novel Device to Monitor Gross Hematuria After Urologic Surgery. *Quality Forum 2020: Shaping Success Together*. 2020. Vancouver, Canada.
19. Schneider C, **Singla R**, Forbes C, Hetherington J, Cho A, Tang S, Rastin T, Hoyda T, Lan J, Nguan C. Quantitative Measurement of Tacrolimus-induced Tremor in Renal Transplant Recipients: A Prospective Feasibility Study. *Western Section of American Urological Association*. 2019. Monterey, USA.
20. Voznyuk S, Mehdic H, **Singla R**, Rohling R, Gill M, Nguan C. An Interdisciplinary Approach to Preventing Retained Surgical Items with the Use of Augmented Reality. *Collaborating Across Borders VII Conference: Crossroads of Collaboration*. 2019. Indianapolis, USA.
21. Burden L, Khehra K, **Singla R**, Cho A, Nguan C. Surveying Sources of Anxiety in Family and Friends of Patients Undergoing Surgical Operations. *UBC Urology 13th Annual Lorne D. Sullivan Research Day*. 2019. Vancouver, Canada.
22. **Singla R**, Forbes C, Lundeen C, Nguan C. Renal calculus targeting using machine learning for extracorporeal shockwave lithotripsy (ESWL). *Western Section of American Urology Association*. 2018. Monterey, USA.
23. Burlinson C, **Singla R**, Honigmann S, Hetherington J, Abolmaesumi P, Rohling R, Chau A. Feasibility of 2D ultrasound guided, real-time, single operator, midline lumbar epidural placement using a novel needle guide. *Society of Obstetric Anesthesiology and Perinatology*. 2018. Miami, USA.

Book Chapters

1. **Singla R**, Nguan C. Service Robots in Healthcare Settings. *Advances in Service Robots*. IntechOpen. 2022.

Patents

1. Rohling R, **Singla R**, Honigmann S, Burlinson C, Hetherington J, Abolmaesumi P. *Apparatus, System, and Methods for Imaging a Medical Device in the Body*. US Provisional Patent No.: 62/666,260.

Grant Funding

1. "Developing Quantitative Ultrasound Imaging for Organ Inflammation and Fibrosis". UBC Health Innovation Funding Investment Award (\$25,000). **Co-applicant**. 2022.
2. "Multi-modal, multi-parametric liver imaging for ultrasound-based stratification of patients with non-alcoholic fatty liver disease". Canadian Institutes of Health Research (CIHR) Project Grant (\$625,770). **Co-investigator**. 2023.

Policy Papers

1. *Policy 044 – Pregnancy and New Parenthood during Medical School*. UBC Medical Doctorate Undergraduate Program. 2020. Vancouver, Canada.
2. *Preparing Medical Students for the Impact of Artificial Intelligence on Healthcare*. Canadian Federation of Medical Students. 2020. Toronto, Canada.

Invited Presentations, Guest Lectures and Panels

- | | |
|---|-------------|
| 1. Data Science and Health Research Cluster, <i>AI in Medicine</i> . Vancouver, BC. | 2023 |
| 2. BMEG 598, Professional and Academic Development. Vancouver, BC. | 2022 |
| 3. SBME Propels, Applying to Medical School as a Biomedical Engineer. Vancouver, BC. | 2022 |
| 4. BMEG 101, Introduction to Biomedical Engineering. Vancouver, BC. | 2022 |
| 5. BMEG 581, Professional and Academic Development. Vancouver, BC. | 2022 |
| 6. SBME Propels, Applying to Medical School as a Biomedical Engineer. Vancouver, BC. | 2021 |
| 7. Biomedical Engineering Undergraduate Student Association, Career Panel. Vancouver, BC. | 2021 |

- | | |
|---|-------------|
| 8. BC Renal, Grand Rounds, Vancouver, BC. | 2021 |
| 9. BMEG 581, Professional and Academic Development. Vancouver, BC. | 2021 |
| 10. Solid Organ Transplant Grand Rounds at BC Children's Hospital, Vancouver, BC. | 2020 |
| 11. UBC Medical Undergraduate Program, Ultrasound and Kidneys, Vancouver, BC | 2020 |
| 12. MD/PhD Open House, Vancouver, BC. | 2020 |
| 13. University of Saskatchewan Faculty of Medicine, Panel on Medical AI. Virtual. | 2020 |
| 14. UBC Island Medical Program, Ultrasound and Kidneys, Victoria, BC. | 2019 |
| 15. Anesthesiology Resident Rounds, Future of Anesthesiology, Vancouver, BC. | 2017 |
| 16. Institute for Healthcare Improvement, Augmented Reality in Laparoscopic Surgery, Vancouver, BC. | 2017 |
| 17. EECE 544, Medical Imaging, Vancouver, BC. | 2016 |
| 18. BMEG 500, Orientation to the Clinical Environment, Vancouver, BC. | 2016 |

Interviews and Media Relations

- | | |
|---|-------------|
| 1. <i>There's more than one way to feel lonely.</i> Vox Media (audio interview). | 2024 |
| 2. Aspire. UBC Faculty of Medicine (video interview). | 2021 |
| 3. Interfaces Podcast. UBC School of Biomedical Engineering (audio interview). | 2021 |
| 4. Interview with an MD/PhD Candidate. UBC Medical Journal (text interview). | 2021 |
| 5. Mental Health Talk. UBC Faculty of Medicine (video interview). | 2020 |
| 6. Day in the Life. UBC Faculty of Medicine (video profile). | 2020 |
| 7. How it's Med Podcast. How it's Med (audio interview). | 2020 |
| 8. Humans of CITAC. Clinician-Investigator Trainee Association of Canada (text interview). | 2020 |
| 9. Meet our Students. UBC Faculty of Graduate and Postdoctoral Studies (text interview). | 2020 |
| 10. SBME Students Rohit Singla and Prashant Pandey Receive 2020 Vanier Canada Graduate Scholarships. School of Biomedical Engineering (text interview). | 2020 |
| 11. Rohit Singla Named 2020 Vanier Scholar. Island Medical Program (text interview). | 2020 |
| 12. Rising Star. UBC Faculty of Applied Science (text interview). | 2017 |
| 13. Finding new ways to visualize the body: 3D surgical markings. UBC Elec. & Comp. Eng. (text interview). | 2015 |

TEACHING EXPERIENCE

- | | |
|--|--------------------|
| 1. Neer Peer Tutors Coordinator. MEDD 422 Transition into Clinical Education. | 2019 - 2020 |
| 2. Session Facilitator. MEDD 421 Foundation of Medical Practice III. | 2019 |
| 3. Graduate Teaching Assistant. EECE 542 Computer-integrated Surgery. | 2016 |
| 4. Graduate Teaching Assistant. ELEC 442 Introduction to Robotics. | 2016 |
| 5. Participant. Instructional Skills Workshop from Centre for Teaching, Learning and Technology. | 2016 |
| 6. Undergraduate Teaching Assistant. CPSC 261 Basics of Computer Systems. | 2015 |
| 7. Undergraduate Teaching Assistant. CPSC 259 Data Structures and Algorithms for Electrical Eng. | 2014 |
| 8. Undergraduate Teaching Assistant. CPSC 260 Data Structures and Algorithms for Computer Eng | 2013 |

EQUITY, DIVERSITY AND INCLUSIVITY EXPERIENCE

- | | |
|--|-------------|
| 1. Providing culturally safe care for Indigenous children and youth, Canadian Paediatric Society | 2023 |
| 2. Panellist, UBC Pre-Medicine Diversity Symposium | 2019, 2022 |
| 3. Fundamentals of OCAP, First Nations Information Governance Centre | 2022 |
| 4. Indigenous Canada, University of Alberta | 2022 |
| 5. Co-Chair, SBME Respectful Environments, Equity, Diversity, Inclusivity Committee | 2021 - 2022 |
| 6. Fundamentals of Anti-Oppression Workshop, Bakau Consulting | 2021 |
| 7. Respect, Sincerity, & Responsibility: Land Acknowledgements @ UBC | 2021 |
| 8. Optimizing Care for Gay, Bisexual, and other Men who have Sex with Men (gbMSM) | 2021 |
| 9. Equity, Diversity and Inclusion in Teaching and Learning, UBC | 2021 |
| 10. Inclusivity in the Learning Environment Course, UBC | 2021 |
| 11. Gender Bias in the Learning Environment, UBC | 2021 |
| 12. Equity, Diversion, Inclusion for Years – Search and Selection | 2020 |
| 13. Panellist, UBC Island Medical Program Pre-Med Diversity Panel | 2019 |

AD-HOC REVIEW EXPERIENCE

- | | |
|--|----------------|
| 1. Annals of Medicine | 2024 - Present |
| 2. BMC Medical Education | 2024 - Present |
| 3. Data Curation and Augmentation in Enhancing Medical Imaging Applications | 2024 - Present |
| 4. Journal of Clinical Medicine | 2024 - Present |
| 5. American Journal of Physiology - Renal Physiology | 2023 - Present |
| 6. IEEE Journal of Biomedical and Health Informatics | 2023 - Present |
| 7. Journal of Medical Education and Curricular Development | 2023 - Present |
| 8. Quantitative Imaging in Medicine and Surgery | 2023 - Present |
| 9. The 45th Annual Canadian Medical and Biological Engineering Society | 2023 - Present |
| 10. Medical Imaging Meets NeurIPS (MedNeurIPS) | 2022 - Present |
| 11. Renal Failure | 2022 - Present |
| 12. Ultrasound in Medicine and Biology (UMB) | 2022 - Present |
| 13. IEEE Data Science & Learning Workshop | 2021 - Present |
| 14. IEEE Transactions on Medical Imaging | 2021 - Present |
| 15. Medical Education | 2021 - Present |
| 16. NeurIPS Data Sets and Benchmarks Track | 2021 - Present |
| 17. School of Biomedical Engineering Research Trainee Day | 2021 - Present |
| 18. Canadian Conference on Medical Education (CCME) | 2020 - Present |
| 19. Computing Machinery Conf. on Health, Inference and Learning (CHIL) | 2020 - Present |
| 20. Neural Information Processing Systems (NeurIPS) | 2020 - Present |
| 21. Medical Image Computing and Computer-assisted Interventions (MICCAI) | 2020 - Present |
| 22. Augmented Environments for Computer Assisted Interventions (AE-CAI) | 2019 - Present |
| 23. Machine Learning for Health (ML4H) | 2019 - Present |
| 24. Information Processing for Computer-Assisted Interventions Conf. (IPCAI) | 2018 - Present |
| 25. Intl. Journal for Computer Assisted Radiology and Surgery | 2018 - Present |

SELECTED VOLUNTEER SERVICE

- | | | |
|---------------|---|--------------------|
| Member | UBC Medicine Well-being and
Wellness Working Group | 2022 - 2023 |
|---------------|---|--------------------|

- Advocated for medical student well-being by conducting a systematic review of student wellness resources and services, identifying and addressing challenges to improvement.

Founder **UBC AI in Medicine** **2019 - Present**

- Designed and led a national series of hands-on AI workshops for over 200 medical students from 9 schools, demonstrating the practical use of AI in healthcare. Featured [here](#).
- Initiated an AI-focused club in response to the growing integration of AI in healthcare, increasing awareness and exposure for medical trainees.

Student Affairs Representative **UBC Faculty of Medicine** **2018 - 2022**

- Acted as a liaison for MD program students to address concerns related to well-being and academic support, collaborating with faculty and staff to enhance resources and programs.

Section Editor, Reviews **UBC Medical Journal** **2018 - 2019**

- Orchestrated peer review processes for student articles, enhancing the quality of submissions through effective feedback from faculty members and providing constructive revision requests to authors.

Vice President, Island Medical **UBC Faculty of Medicine** **2018 - 2019**

- Elected as class representative for a cohort of 32 medical students in the Island Medical Program, providing a voice for peers on academic matters.

Co-Director **Hatching Health** **2016 - 2017**

- Led a 6-person team to organise a medical technology hackathon, securing \$25,000 in funding for the event attended by 135 participants.
- Managed event logistics including venue, vendor coordination, and participant registration, ensuring a smooth and successful event.

Founder and Mentor **Biomedical Eng. Connections** **2016 - 2017**

- Launched a mentorship program connecting undergraduate, graduate, and new graduate students, cultivating a supportive academic community.
- Administered program logistics such as participant matching and communication, facilitating a rewarding mentorship experience.

Radio Host **Sharing Science Radio** **2015 - 2017**

- Hosted a bi-weekly radio show presenting scientific news and interviews for general audiences, covering topics like medical imaging, salmon ecology, deep-sea research, and science education.

Co-Founder and President **UBC Technology in Medicine** **2014 - 2015**

- Directed the club in organising hands-on surgical workshops and seminars, educating students on surgical technology, medtech collaboration, and e-Health technologies.

Assistant Coach **South Delta Varsity Football** **2010 - 2015**

- Trained and mentored over 80 teenagers on American football techniques and strategies on a weekly basis, contributing to more than 18 students receiving university scholarships.

MEMBERSHIPS AND AFFILIATIONS

- | | |
|--|-----------------------|
| 1. <i>Member</i> , National Kidney Foundation | 2022 - Present |
| 2. Member, Canadian Donation and Transplantation Research Program | 2021 - Present |
| 3. Student Member, Clinician Investigator Trainee Association of Canada | 2019 - Present |
| 4. Student Member, Canadian Medical Association | 2018 - Present |
| 5. Student Member, Doctors of British Columbia | 2018 - Present |
| 6. Medical Student, College of Physicians and Surgeons of British Columbia | 2018 - Present |
| 7. Member, Provincial Rural Point of Care Ultrasound Working Group | 2021 - 2022 |
| 8. Member-At-Large, Canadian Society of Transplantation Pediatric Group | 2021 - 2022 |
| 9. Student Member, Canadian Point of Care Ultrasound Society | 2019 - 2022 |
| 10. Student Member, American Society of Nephrology | 2019 - 2021 |
| 11. Member, Artificial Intelligence in British Columbia | 2019 - 2021 |

CERTIFICATIONS AND ADDITIONAL TRAINING

- | | |
|--|-----------------------|
| 1. Basic Life Support Provider (Health Care Provider), Heart and Stroke Foundation | 2018 - Present |
| 2. <i>NYC Founders Fellowship</i> , Primary Ventures | 2023 |
| 3. Basic Certificate in Quality and Safety, Institute for Healthcare Improvement | 2021 |
| 4. Designing and Implementing AI Solutions for Health Care, Harvard Medical School | 2021 |
| 5. Healer's Art, Island Medical Program | 2019 |